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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,469	07/03/2003	Nobutaka Tauchi	4041J-000738	3157
27572	7590	12/16/2005		EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C.				REGO, DOMINIC E
P.O. BOX 828				
BLOOMFIELD HILLS, MI 48303			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/612,469	TAUCHI, NOBUTAKA
	Examiner	Art Unit
	Dominic E. Rego	2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07/03/2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>07/03/2003</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Takatani et al. (*US Patent Application Publication #20050227616*).

**Regarding claim 1**, Takatani teaches a wireless communication terminal operating based on a time division scheme (*paragraph 0064*) and having a normal communication function between the terminal (*Figure 1, element 6*) and a base station (*Figure 1, element 2*) and a relay communication function between a second wireless communication terminal (*Figure 1, element 5*) and the base station (*Figure 1, element 2*) (*Paragraphs 0047, 0048, and 049*), the terminal comprising:

a baseband processor that spread-demodulates relay signals (*Figure 1, terminal 6 receives signal from terminal 5*) and spread-modulates the spread-demodulated relay signals (*Figure 1, terminal 6 transmits relay signals to the base station*) (*Paragraph 0060*) ; and

a multiplex controller performing an operation for producing a command so that the baseband processor multiplexes the spread-modulated relay signal with the other spread-modulated relay signal (*paragraph 0064: Takatani teaches the second terminal 6 may be able to relay signals for a plurality of terminals simultaneously*).

**Regarding claim 2,** Takatani teaches the wireless communication terminal according, wherein the multiplex controller changes the operation based on a condition within a service area of the terminal (Paragraph 0066, 0069).

**Regarding claim 3,** Takatani teaches the wireless communication terminal, wherein the multiplex controller changes the operation in response to an instruction from the base station (Paragraph 0003).

**Regarding claim 7,** Takatani teaches the wireless communication terminal, wherein the condition is the number of free time slots of the time division scheme of the wireless communication terminal (Paragraph 0064: *Takatani teaches TDMA the user of the second terminal 6 may still able to make and receive calls or send and receive data even while being used as a relay by the first terminal 5. This can be achieved using time division multiple access (TDMA), wherein TDMA slots (number of free time slots) are allocated for the terminal's own use and different TDMA slots are allocated for use by another terminal*).

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takatani et al. (*US Patent Application Publication #20050227616*) in view of Nakamura et al. (*US Patent Application Publication #20030012294*).

**Regarding claim 4**, Takatani teaches a wireless communication terminal operating based on a time division scheme (*paragraph 0064*) and having a normal communication function between the terminal (*Figure 1, element 6*) and a base station (*Figure 1, element 2*) and a relay communication function between a second wireless communication terminal and the base station (*Figure 1, element 5*) and the base station (*Figure 1, element 2*) (*Paragraphs 0047, 0048, and 049*), the terminal comprising:

a baseband processor that demodulates a relay signal (*Figure 1, terminal 6 receives signal from terminal 5*) and modulates the demodulated relay signal (*Figure 1, terminal 6 transmits relay signals to the base station*) (*Paragraph 0060*); and except for transmission rate setting means for setting a transmission rate for the relay communication based on a condition within a service area of the base station.

However, in related art, Nakamura teaches transmission rate setting means for setting a transmission rate for the relay communication based on a condition within a service area of the base station (See Claim 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of transmission rate setting means for setting a transmission rate for the relay communication based on a condition within a service area of the base station, as taught by Nakamura, in the Takatani's device in

order to control the transmission speed by using a buffer storage 14 so as not to exceed the control transmission speed set by the transmission speed setting section 12. (See Abstract of Nakamura).

Claims 5,6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takatani et al. (*US Patent Application Publication #20050227616*) in view of Nakamura et al. (*US Patent Application Publication #20030012294*) and further in view of Ando (*US Patent Application Publication #20050141463*).

**Regarding claim 5**, the combination of Takatani and Nakamura teach all the claimed elements in claim 4, except for the wireless communication terminal, wherein the transmission rate setting means changes the transmission rate in response to an instruction from the base station.

However, in related art, Ando teaches the wireless communication terminal, wherein the transmission rate setting means changes the transmission rate in response to an instruction from the base station (*Paragraph 0016,0017 and 0018*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of the wireless communication terminal, wherein the transmission rate setting means changes the transmission rate in response to an instruction from the base station, as taught by Ando, in the combination of Takatani and Nakamura device in order to optimize the communication.

**Regarding claim 6**, the combination of Takatani, Nakamura and Ando teach all the claimed elements in claim 4. In addition, Ando teaches the wireless communication terminal, wherein the transmission rate setting means changes a modulation scheme (*transmission parameter*) of the baseband processor to set the transmission rate (See *Ando, Paragraph 0018*).

**Regarding claim 8**, the combination of Takatani, Nakamura and Ando teach all the claimed elements in claim 4. In addition, Takatani teaches the wireless communication terminal, wherein the condition is the number of free time slots of the time division scheme of the wireless communication terminal (Takatani teaches the wireless communication terminal, wherein the condition is the number of free time slots of the time division scheme of the wireless communication terminal (*Paragraph 0064: Takatani teaches TDMA the user of the second terminal 6 may still able to make and receive calls or send and receive data even while being used as a relay by the first terminal 5. This can be achieved using time division multiple access (TDMA), wherein TDMA slots (number of free time slots) are allocated for the terminal's own use and different TDMA slots are allocated for use by another terminal*).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miyake et al. (US Patent #6,678,341) teaches multimode radio communication system.

Seraj (US Patent #6,055,434) teaches method and system for locating a mobile station within a mobile telecommunications network.

McKee et al. (US Patent #6,915,135) teaches method and system for detecting object presence and its duration in a given area.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic E. Rego whose telephone number is 571-272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dominic E. Rego

EDAN ORGAD  
PATENT EXAMINER/TELECOMM

ED. 12/16/05